

**FLOOD CONTROL ADVISORY BOARD
MINUTES
December 1, 2004**

Kent Cooper, Chairman called the meeting of the Flood Control Advisory Board (FCAB) to order at 2:00 p.m. on Wednesday, December 1, 2004.

Board Members Present: Scott Ward, Vice-Chairman; Kent Cooper, Chairman, Paul Cherrington, Ex Officio; DeWayne Justice, Secretary; Melvin Martin; Hemant Patel, Hassan Mushtaq (for Thomas Callow);

Board Members Absent: Thomas Callow, Ex Officio:

Staff Members Present: Julie Lemmon, General Counsel; Dick Perreault, CIP/Policy Manager; Tim Phillips, Acting Chief Engineer & General Manager; Russ Miracle, Division Manager, Planning and Project Management; Mike Wilson, Division Manager, Lands and Right-of-Way; Tom Renckly, Structures Management Branch Manager; Linda Reinbold, Administrative Coordinator; Doug Williams, Planning Branch Manager; Mike Duncan, Floodplain Delineation Program Manager; and BJ Johnston, Clerk of the Flood Control Advisory Board.

Guests Present: Terri George, DEA; Brian Fry, Dibble & Associates;

1) APPROVAL OF THE MINUTES OF THE MEETING OF OCTOBER 27, 2004.

ACTION: It was moved by Mr. Justice and seconded by Mr. Martin to approve the minutes as submitted. The motion carried unanimously.

2) FISCAL YEAR 2005/2006 CAPITAL IMPROVEMENT PROGRAM (CIP) PRIORITIZATION PROCEDURE RESULTS AND STAFF RECOMMENDATIONS

Dick Perreault, CIP Manager, presented a summary of the *Fiscal Year 2005/2006 Procedure For Identifying And Prioritizing Potential Five-Year CIP Projects and Staff Recommendations*.

Cooper: Regarding the City of Mesa project, you used the word “deferred”. I’m not sure I understand what that means.

Perreault: Perhaps I should have used the word “referred”. It’s not ready to be included in the CIP and will not be considered a CIP project at this point. So we are deferring it to our planning program. When Doug Williams makes his presentation this afternoon, you will see that it is included in his ed budgetproposal for next year. The status of the project is that they have just completed the reconnaissance and feasibility study and there are

agreements that need to be put in place before it can actually be considered a Capital project.

Cooper: I understand and appreciate that clarification.

Martin: How much did they cut off the Mesa project that you added to the CIP?

Perreault: Mr. Chairman, Mr. Martin, the original request was for \$9.2 million which also included the design and construction of the project. Their revised proposal at last 'months meeting, they were asking for \$100,000 in planning assistance.

Martin: So the only thing that is in the budget now is \$100,000?

Perreault: Mr. Chairman, Mr. Martin, actually that amount is not in the budget yet.

ACTION: It was moved by Mr. Patel and seconded by Mr. Mushtaq to approve the staff recommendations as submitted. The motion carried unanimously.

3) FISCAL YEAR 2005/2006 DAM SAFETY PROGRAM, RESOLUTION FCD2004R015

Tom Renckly, Project Manager, presented this Resolution to authorize performance of the District's Dam Safety Program work inclusive of: recurrent dam safety activities, structure assessment and dam rehabilitation.

Patel: How much competition are we seeing in terms of the construction and design community? I'm looking at some of the costs and they seem so high. Is this a highly specialized area where there are few people completing for this work?

Renckly: Yes, it is a highly specialized area. On the consultant planning, pre-design, design phase, there are good consultants in the valley. However we typically find that to make up a complete consultant team, they have to go to their offices outside of the Valley, such as Denver and other areas. So we end up with sub-consultants, which is fine. We end up with a very good consultant team. On the construction side, we really haven't had much experience with dam rehabilitation. Our first hard ones are going to be White Tanks #3 and McMicken Fissure Risk Zone Remediation; both projects will be coming up next calendar year. So we will see about the construction competition at that point.

Patel: My advice would be that because this is such a long term program and we are looking at over \$200 million, we have to be careful that we are not discouraging competition with both the design community and the construction community. We need to make sure that there are plenty of providers so that we are not locked into the same two or three that we do business with; otherwise they will start dictating the price and the schedule.

Renckly: Absolutely understood. A lot, of course, is based on what is out there. Most of the work that we are doing under the Dam Safety Program goes through

the normal process of being advertised, requesting a letter of interest, technical proposals and such.

Patel: I understand, but if we are looking for someone who has done three projects with Flood Control or something like that?

Renckly: We are absolutely looking for that new blood. As a matter of fact, we have hired some recently that haven't worked previously on our program.

Patel: Good, because that is a huge program and we don't want to be locked into using certain providers.

Renckly: We also seen consultants actually build some of their staff based on some of the work we've seen.

Cherrington: The deficiencies at the dams all seem to be physical deficiencies. Some of those are identified because of more advanced technology. There is also advanced technology in the hydrology and hydraulics. The storms for which those dams were designed, are any of them because of changes in that respect?

Renckly: We have looked at that on some of the structures as we have been studying some of the other issues. When you look at the flood that the dam is supposed pass, many of the structures have low spots on them and do not pass the Probable MF (PMF)maximum flood, but they pass a very large percentage of that maximum flood. As we go in and do the Phase I Aassessments, we have recommended that a number of the PMF's be recalculated. What we have found is that typically when they are recalculated, that number isn't that much different from the original calculation. The change is typically when you see land subsidence or lowering of the crest. That is typically the problem with passing the large flow samount. Other things that we do as we see low spots on the dams, typically we will fix those with our own O&M crews, but when the structure is a couple of feet low over the entire length of the structure, it becomes a rehab issue. Again, we're talking about a very high percentage of the maximum flow in that case. Other physical changes that are occurring at the dams are the cracking and other issues in respect to the foundation. The types of foundations that the dams were built on in the past typically would not be built today. Some of the outlets are corrugated metal pipes, so the issues vary quite a bit. There is also a concern in some cases with respect to the level of flood protection that the dams are providing.

Cherrington: The issue of having to repair all these dams because subsidence, subsidence is because of pumping. Pumping continues. So I assume you are looking at future pumping and subsidence and how to protect against that.

Renckly: Absolutely. It is quite an issue to try to estimate the amount of future land subsidence. However, we do typically overbuild the structures for that purpose, for instance, White Tanks FRS #3 where we are building an extra foot into the structure. We are also building extra width in the crest so that we can raise the crest another foot higher if necessary without having to add

to the whole embankment. So we are looking at that. I would say that there are only about 5 dams where land subsidence is a factor. In the other dams, the primary issues are cracking and foundation issues.

Cooper: Refresh my memory on why Maricopa County has responsibilities for dams within Pinal County.

Renckly: The structures in Pinal County, there are actually four, are Powerline, Vineyard, Rittenhouse and Apache Junction structure, which is part of the Buckhorn- Mesa project. Basically, I think that when those were built and designed in the late 1960's – early 1970's there was a need to provide flood protection in Pinal County as well as Maricopa County. As I understand it, the planners at that time did look at the boundaries and said here is the best place to put the structures.

Cooper: So they were actually designed to protect Maricopa County?

Renckly: Maricopa County and portions of Pinal County. I don't want to speculate but it is likely that the primary flood protection was Maricopa County.

ACTION: It was moved by Mr. Justice and seconded by Mr. Mushtaq to approve the item as submitted. The motion carried unanimously.

4) FISCAL YEAR 2005-2006 PLANNING PROGRAM, RESOLUTION FCD2004R016

Doug Williams, Planning Branch Manager presented Resolution FCD2004R016 authorizing the District to enter into negotiations for technical service contracts for planning studies and negotiate rights-of-entry for those studies, subject to the ratification and approval of the Board of Directors and approval of the 'Districts FY 2005-2006 Budget.

Martin: When you bid these things, are some of them for aerial mapping?

Williams: Yes, Mr. Chairman, Mr. Martin. We start these projects with requesting proposals from aerial mapping companies. In the outlying areas, there is no mapping or the mapping is incomplete, so we have to start with the mapping. That's one of the reasons these studies take 3 or 4 years to get through the process because the mapping takes a long time and is very expensive. Now in the last year and a half we started using LIDAR as an additional mapping supplement. That is a kind of laser that flashes about 70,000 times per minute so we can get extra details. There have been a lot of problems with LIDAR in the southern arid regions but we are working through that. At this time, we think that we are only going to get a 20-30% cost reduction in mapping when using LIDAR as a supplement but we get tighter much more accurate mapping.

Patel: Are there other techniques to cut down the time? There is a lot of other new technology out there and I'm wondering if that was available, would that be of benefit to the District.

Williams: Mr. Chairman, Mr. Patel, obviously the District is always looking at ways to cut costs. In conjunction with our in house survey experts and the

consultants actually doing the work, we think that for what we are getting, we are optimizing the accuracy of what we need for our studies. We are working with some very high quality people. Some of our consultants have had previous experience with the Defense Department and military applications. We don't want to go into a design project where we have a bust in the survey office. We think that we are getting the best product for the cost. We have also looked using satellite imagery and things like that, but it is difficult to get down to the 2- foot contours resolution that we are after in these outlying areas.

Patel: So have we ruled that totally out or are we still looking at that option? I know in the private sectors some of the satellite imagery is being utilized. It's quick mapping. I've read some articles that say one of the advantages are that it moves very fast.

Williams: Mr. Chairman, Mr. Patel, our staff has looked at the satellite imagery. There is a lot of competition for the satellite time and it is hard to schedule the satellites to fly over certain areas. Again, to get it down to the 2-foot resolution level is hard to do and very expensive.

Patel: From our stand point, when we are going out and procuring this, are we asking for 2- foot contours within the best time and the best price?

Williams: Yes and there is another factor involved, Mr. Chairman, Mr. Patel. There are FEMA requirements and standards that we have to adhere to with our floodplain delineation. FEMA doesn't have any specifications for the satellite imagery. So we are heldback by FEMA. Every time we going out for bid on these types of contracts we are always looking at other methods.

Martin: Has Rainbow Valley had any mapping or studies done?

Williams: Mr. Chairman, Mr. Martin, there are some ongoing studies in Rainbow Valley. The Rainbow Valley watershed is about 320 square miles that we are mapping or propose to map. There are a couple of large-scale developers in the center portion of the watershed. We are trying to get their data to possibly reduce our cost but it is only about 2-3% of the area. There are other large-scale developers planning to build in the Mobile area. What we've done there isto incorporate mapping in that area which will reduce the cost of mapping that area by approximately one half.

Martin: I happened to be out there over the weekend on another matter. The comments from the local residents were that the Corps of Engineers built a dam out there and they didn't want to keep it up. It worked fine while they had it but the Corps came in and bulldozed it over and flooded everything below the dam. I happened to be out there looking at old car parts and half of them were down in the ditch. I don't understand whywe are going in to map something that has already been done, to prove that this doesn't flood, when we know it floods. It seems to me that we should be developing projects.

Williams: Mr. Chairman, Mr. Martin, the Rainbow Valley area is very flat. flat There are a lot of alluvial fans areas that we want to get tight mapping on. When the Corps of Engineers built their dams 20 or 30 years ago, they used generally available USGS maps with 20-40 foot contours. Sometimes you get down to 10 feet in some area. It creates a very loose hydrology that may be good enough for building structures like that, but we want to get much tighter information. We anticipate that this Rainbow Valley area is going to develop in the next 5 to 10 years. It is part of our goal of getting out ahead of the development to get good mapping.

Martin: Does anyone at Flood Control have knowledge of the dam that got destroyed out there? It really is something that you should look at; it did a lot of damage.

Williams: Generally when we start out study portion during the mapping, we start to develop a database of all the issues. That is generally when we pick up these types of issues, we will try to contact the Corps and get the details.

Ward: Mr. Chairman, Doug, I observed that there is about a million one hundred thousand dollars in costs for mapping Rainbow Valley. How do you categorize which are the areas that are most sensitive or impacted by growth that really need to be mapped right away?

Williams: Mr. Chairman, Mr. Ward, a lot of times, we look at the USGS blue lines or where the watercourses are located and try to map those. Rainbow Valley is unique in that it is so flat towards Waterman Wash that with the steep mountains, it acts as a basin, and we have to get two-foot contours. We feel that we need this type of mapping. In a lot of other studies in the past we have piecemealed the mapping and sometimes it doesn't fit in with other areas. This sometimes causes years of delay and we usually end up spending as much money when we are done with that, trying to bring all those things together, than if we had just done the entire thing from the start.

Ward: What areas of Maricopa County do you feel that we are really insufficient on in mapping and that we have to hit right away?

Williams: Mr. Chairman, Mr. Ward this area that we are studying, between Wickenburg and this area, we are catching about 90% of the future population growth. We are doing this area on advice from our Regulatory Division. They are getting a lot of land development requests from one-acre type developments. Those people generally don't have the benefit of large-scale developments using engineered drainage plans. We think this is important and that we will see a lot of that in this upper portion of Rainbow Valley. The lower portion will be developed by large-scale developers which is why we dropped to 4-foot contours to save costs. The Wittmann area is growing. Wittman is a very complex watershed with lots of sheet flow washes. Up here we anticipate a lot of growth. Wickenburg has a lot of growth which will be addressed in the ADMP this spring. We are just completing the Desert Hills area that is about 80% built out, lots of one-acre type housing patterns. Those people have built in areas of the transportation patterns. We are looking at mostly growth and I think that we are capturing, certainly a wide

share of this growth. Now we are starting to work back inside the older developed areas. There is the Cave Creek floodplain that comes through this area. And we are going to be looking at reducing that or possibly eliminating that. So we are going to start splitting our efforts between the unincorporated areas and the long-standing existing problems. That is our long-term goal.

ACTION: It was moved by Mr. Mushtaq and seconded by Mr. Patel to approve the item as submitted. The motion carried unanimously.

5) PROPOSED FLOODPLAIN DELINEATION PROGRAM FOR FISCAL YEAR 2005/2006

Mike Duncan, P.E., presented the staff recommendations for the Floodplain Delineation Program for the inclusion in the Fiscal Year 2005/2006 Operating Budget.

Martin: I have a question. Painted Rock Dam was put in to flood; it was supposed to flood the area. Why are we spending a half a million dollars to figure out why it floods? I can't vote for that. That's ridiculous that we are spending that. That whole area in the 70's and early 80's was fill and it did its job, channeled the water out and did a wonderful job. It flooded that area and that is what it was for. Why in the world are we studying to see if it is going to flood?

Duncan: Mr. Chairman, Mr. Martin, What we are studying are the tributaries that flow from the north side down into the Gila River. The Painted Rock Dam is here and the reservoir and flooding area are here. When we do study this watershed in the future, we will not study the reservoir, we will be studying the tributaries. People may want to build along the washes that flow into the reservoir. .

Martin: Is there any development down there now?

Duncan: Yes, there are some farms and individual lots. We have one floodplain delineated already, that's called Copper Wash that is towards the middle.

Phillips: Mr. Chairman, Mr. Martin that is why we do the A Zone Delineations in the outlying areas. It is not as detailed a study but it does put something on the map so that when someone comes it to develop or build a home they know that they are within an area that has potential to be flooded. So it is not a tool that says you build your house to this elevation, you need the detailed study for that. What the approximate studies do is give them an idea that they are in an area that could potentially be flooded, the exact degree is unknown. The lower cost to do such a broad area gives you a broad-brush perspective on the potential for flooding. That is how this tool is used. The detail studies are really for where people come in, they want to build a house and we tell them what the minimum elevation is. What this does is give them an idea that they are in an area that has potential for flooding. In fact, ultimately, we should have at a minimum, A Zones for the entire County. Then in the future when someone wants to do a development down there, we have something on the map that says there is potential for flooding here.

- Martin:* We must already have something if we already have a project in there. We just heard that there is already a project in there. So there had to have been a study to tell us that we had to do that one project.
- Duncan:* Copper Wash is a Zone A that was done by FEMA many many years ago. It's about 10 miles long.
- Martin:* That is throwing half a million dollars away as far as I am concerned.
- Cooper:* One of the things that I would need some clarification on, is this last month we had a request to provide funding to buy a bunch of houses that people had built within washes and other places that they shouldn't have been. We have to come in later because there is no mapping and buy them out at more than a cost of \$500,000. It seems to me that if this helps the county planners in terms of issuing building permits so that we don't create a similar situation in the future then it is worth the money. If it doesn't do that, then I guess I have some questions about that as well.
- Patel:* That's a good question. Will this avoid that problem down the road?
- Phillips:* From my perspective, having an A Zone delineated initiates the flood zone process. If we have nothing there, someone could come in there build a house and we are not even involved in the process. Whereas, with an A Zone, we know it's there, it's one the maps, when someone comes in, we have a perspective. We review it against the information that we have associated with the A Zone. As you said, Mr. Cooper, this gets us involved with someone who wants to build a home on a very cursory level but it gets us involved in the fact that we are reviewing where they are building the house as opposed to a place where there isn't even an A Zone. T, they go down to Planning & Development, get their building permit and we aren't even asked the question if there is any involvement with a floodplain because there is no jurisdiction.
- Cooper:* That is the thing I'm concerned about, because if we have to go in and buy these people out....
- Martin:* When you go to get a building permit in the Ccounty, if it is in an A Zone they do not even look to see if it is in a floodplain. If it meets their specifications, they will let you go; it has happened up in Wittmann I know that for a fact. If the Ccounty says they are sitting in a flood zone, I'm all for spending some money, but the Ccounty doesn't do that. The building department does not do that.
- Duncan:* I am aware of some problems the City of Surprise had up in that area. But I am not aware of any that Planning & Development had.
- Phillips:* Mr. Chairman, Mr. Martin, I will check with our staff in permitting, that had represented our interests in Planning & Development and are not part of the Planning & Development staff. I will find out the process when a building permit is requested in an A Zone and will report back to you next month. It

is my understanding that the process is that we get visibility of that permit because it is in an area regulated by an A Zone. I will confirm that for you.

Cooper: If that is true, then I think it is money well spent. If it really doesn't have any effect then there will have to be better understanding of justification.

Martin: Are we going to add that to the motion? That if it is in the A Zone it has to be related to the Ccounty permitting office they do not issue permits without approval from the District.

Duncan: Zone A is a floodplain and it does trigger the floodplain process.

Martin: I'm telling you that they don't do it. I just built some structures in Wittmann and I'm telling you that they don't do it.

Phillips: Did you have a floodplain use permit?

Martin: Absolutely. I had a permit and they don't ask for it. If we are going to spend half a million dollars, we ought to put language in that this Board sees that the Ccounty building permit staff know that if it's in an A Zone, they are not supposed to build until the District has approved it.

Phillips: If I could turn that around another way, if we are not getting visibility with permits in the A Zones that is an institutional issue that we need to take up with Planning & Development. But you are right, if no one is regulating against the A Zone, there is no value in doing them. I believe that we do regulate against the A Zones and I will confirm that. If we are not, we need to make that happen or there is no value in doing it.

Patel: I have a related question. It appears that what is getting our attention in this matter and the prior one is that we are spending millions of dollars in very outlying areas. I'm all for getting out ahead of development but I just want to get a feel for what our philosophy is as a District, because all this money is being raised by the homeowner right here. We're quite happy not to participate in projects that the homeowners right here paid taxes on. We're taking that money, spending millions of dollars, to study outlying areas. Do we have some kind of a gauge as to how much money we should be spending? There is still a lot of area to study; we don't want to get too far ahead of ourselves.

Phillips: Mr. Chairman, Members of the Board, do we have a written criteria that says this is where we do certain studies? Probably not. I would offer to you that as we look at how to provide flood hazard mitigation to the entire Ccounty and maximizing the amount of dollars to do that, we have a pretty broad program. Within the delineation program, which is one of the mandated functions that we do, there are also subsets. We could take that \$500,000 for the A Zone and maybe do 5 miles of detailed studies. If we did that, development would probably out pace us because of the cost and time required to do the degree of mapping for a detailed study. I think the A Zone is a broad-brush look to get us on the map and something that we can regulate to before the development gets there. The \$500,000 is a lot of money

but when you look at it in relation to the area that it is covering, on a cost per acre basis, it is very small. Ultimately, as the Ccounty develops, we continue the detailed studies and that gives us a better regulatory tool to prevent people from building in the floodway and that if they are going to build in the floodplain this is the required elevation of your house or other criteria necessary. I see it as a step process, trying to get something that we can regulate to, to preclude reasons to buy out properties because people had no idea and it wasn't intuitively obvious to them that they were building in a wash, while maximizing the money to do all that we have to do.

Patel: As far as buying the property, the way I understood that program, we are just setting aside a certain amount of money. It's not a free for all to bail out everyone who builds in a wash.

Phillips: The constraints are actually more stringent than that. We look at specific requests and will have a budget item on a year-by-year basis based on those requests. So it isn't even a pot of money each year, the buy out program will be based on those who have applied each year.

Patel: So, as a taxpayer within the area that's coming up with all the bucks, I like that kind of approach because we are containing the risk. I think it would behoove the District going forward to talk among them regarding what is fair to the taxpayer coming up with the dollars in terms of how far and why we get these very expensive studies.

Phillips: I would offer to you that there is a price to pay for being out in front. The taxpayers today are going to pay for the protection tomorrow.

Patel: You just got through saying that because of the way we are conducting studies it takes so long that development constantly outpaces us. So yes, by studying that corner there we might be getting ahead of development but we still have one heck of a problem right in our back yard because our studies are two or three years after the fact.

Phillips: Maybe you misunderstood what I said. I think the way Russ Miracle and Doug Williams have managed the planning program, we have a goal of being out ahead of development and we've been pretty successful at that. If you look at where the core area is on Doug's map, we've covered all the core area and we are on the outskirts. Now we are moving a little further out with the delineation, so it's really a step process. I think if we limited ourselves on a floodplain delineation perspective to only detailed studies, I would say that we would get outpaced by development. By doing the approximate studies we have a regulatory tool to help us manage the outlying areas. That will also give us the lead as to where to do the detailed studies because we know a little bit more about the area than just going in and saying here's one particular wash in one particular area. This gives us information going in to help determine where we really need to do the detailed studies.

Patel: One other point I want to make since you brought up the timeline of the studies and that keeps coming up, I raise this point each year. I would love to see the District challenge the private sector so that when you come out

with a project or study, don't just ask for qualifications, ask the private sector to compete on time and cost. Let them come to you and say "we're going to get this study done in 6 months" rather than the standard two and a half years, or whatever we give them. It's crazy. The bar graph that we saw earlier showing where these studies took a whole year to map, two years to study it, millions of dollars and people have already built up in there. What we are doing here is really predicated on the fact that it is going to take so long to get the detail study that we might as well go ahead and do the cursory study. We are basing everything on a fact that we are creating, that it takes two or three years to complete a study. I don't know if that is a fact. I don't know of any other sectors that accept that, a private developer doesn't. If you told a developer that it was going to take 2 years to develop a drainage plan, they will move on and find another project designer.

Phillips: Maybe this is a debate for another time. My response to that would be that a developer typically looks at a much smaller area than we do. We are looking regionally.

Patel: Developments are getting bigger and bigger. Some of this stuff is massive.

Phillips: The traditional developments aren't multiple sections of land. Many of our studies are even beyond that. We're taking a much broader regional approach, in fact, we don't want to rely on the developers' drainage that doesn't look regional but only at what they need then. We will end up very far behind the curve and things will be done piecemeal.

Patel: I understand that if we have a study, we have to be in the driver's seat. But we are still not, because the approach is that we are accepting 2-3 year schedules. It's forcing us to go way out into the corners of the Ccounty to put our stake in the ground because it takes us 3 years to do a detailed study. So I understand that we need to talk about this because this is starting to stretch the envelope.

Cooper: The thing that concerns me about these unmapped areas is not a subdivision that may come in, because we do have regional authority under the subdivision statutes to take care of these things. What I am running across is in the very rural areas are the lot splitters. The county doesn't control that through planning, there's no subdivision or zoning requirement other than the underlying zoning. What we are seeing is lot splitters that come in and divide 5 times, then those people divide those tracts 5 times and they don't put in the road or any improvements. They certainly don't worry about flood control issues. If there is no restrictionsdelineation on these lot splitters and no flood delineation of any kind, there is no way for the Ccounty to not issue a building permit to some people that really are lot splitting in the middle of a wash. I've seen that happen and I know that it is a problem. It's these individual lot splitters and the people who are moving out, wanting to get away from the urban environment, who go out to the far stretches of the Ccounty and build on their little acre, sometimes a trailer where they have to haul in water and have a generator. That is what is going on and I think we have to keep ahead of the movement. If we can just verify that the Planning & Development would have authority to withhold a permit if someone is

about to build in an A Zone, that would create a lot of improved feelings for this agenda item. If you can warrant that today and verify that, fine. Maybe what we can do is if you find out that is not the case, we can just withhold sending this item on up the ladder until we have a chance to act on it again. I don't know what our suggestion would be but I am sensing reluctance on the part of some of the Board Members to approve this without knowing that there is a useful purpose to a Zone A.

Ward: Mike, do you know what the water table is like out in this area and the condition of the water?

Duncan: No, I do not.

Ward: Anyone else know? I don't either. I'll just add a couple of statistics. I echo Mr. Cooper's comment. As you know, I have gone on record in saying that I wish we could map the entire county. I talked to Mike Ellegood, who is w running MCDOT, about this specifically on a project I am working on. He said that by mapping an area that is a watershed that the savings in overall planning is going to be significant. Having some watercourse planning and design will be helpful for some projects he is doing out in the White Tanks. I went to a seminar a couple of weeks ago and I heard Tracey Clark, an economist for Arizona State University, talk. He said that we are going to grow by 110 – 125,000 people a year and that they are all going to be in West Maricopa County or in Pinal County just because of geographical restrictions. I side with you, it's a philosophical decision, the urban individuals paying taxes want responsive government, but honestly we have got to be ahead of development. I think if we do and we do these long-range maps they are going to pay off in other agencies of Maricopa County. So I support this. I hope that you are diligent in what you do with the money and I hope you put the screws to the private sector to get your mapping done. But it is going to pay dividends in the long run.

Duncan: One thing I would like to point out and failed to mention, overall we have identified about 5000 significant watercourses to delineate throughout the Ccounty. Right now we have delineated about 3000 of those 5000.

Cooper: Good, we are more than half way there.

Phillips: Mr. Chairman, Tim Murphy, Branch Manager of our Floodplain Management Branch, said that yes, we do get consulted when someone comes in for a building permit in an A Zone, we do get visibility on it. It comes in here, we get to review it and they have to obtain a floodplain use permit, if it is appropriate. If we look at it and there is no impact within the watercourse then we sign off on the permit.

Cooper: That's the way it should be. One other quick question I have, as I see your detailed studies, as those area urbanize, is my understanding correct that the actual floodplain issues actually diminish? A lot of the larger basins that I built when I was a developer actually have less water getting to them because every parcel has to retain the on-site drainage when it develops for flood and

drainage purposes. Do these detail studies find that the overall flooding problem is diminished with urbanization?

Duncan: Mr. Chairman, the criteria for retention was set up so that it could be no worse. We have found some cases where the floodplains shrink a little and some are just about the same. The retention is typically a two-hour storm requirement and when we do our studies, we do six hour and twenty-four hour storms.

Cooper: So that retention was set up to allow for the extra pavement and sidewalks and houses?

Duncan: They were set up to maintain the natural conditions.

Phillips: The other thing that these studies do is use the modeling methods that have become better and more accurate. Obviously, when they are upgraded with a new more accurate approach, it may that also affect the size of the floodplain.

Martin: I have one final question. I don't think the agencies are talking to the other agencies. Other agencies have to be mapping areas and if they have the data, why can't we access that data? I think you are looking down the narrow road and not the wide picture. There are other people who have the same data you need and you aren't using it.

Phillips: Mr. Chairman, Mr. Martin, there is an individual from my military side that works for Space Imaging Systems that does all the mapping for the war in Iraq. He was showing me one day how they drilled down on where Saddam's sons were ambushed in their house. I started talking to him about this from a District standpoint. Is there a reasonable application? We have initiated those discussions. It really comes down to the accuracy that is necessary. It is also not cheap and subject to the availability of the satellite. I would take issue with your comment that we are not looking at other alternatives, because we are. It just hasn't become an economical, feasible alternative at this time.

Martin: The thing is the data would be free, right?

Phillips: Nothing is free. This particular agency is not a federal agency; it is a private company that is providing the mapping for the federal agencies.

ACTION: It was moved by Mr. Mushtaq and seconded by Mr. Ward to approve the item as submitted. The motion carried 6 in favor, 1 opposed.

6) COMMENTS FROM THE CHIEF ENGINEER AND GENERAL MANAGER

Phillips: Mr. Chairman, Members of the Board, I don't really have anything at this time. Due to the holidays, our next meeting will be January 26, 2005

7) SUMMARY OF RECENT ACTIONS BY THE BOARD OF DIRECTORS

8) OTHER BUSINESS AND COMMENTS FROM THE PUBLIC

- Patel:* In terms of future items, can we have an agenda item where the staff comes up with some recommendations for what we can do to tighten up our schedule and costs on these studies? We keep approving the studies, so we know we have something that works. But what can we do better to solve the scheduling problems and costs problems? Those are the two things that are burrs in our saddle.
- Cooper:* I can almost give you an example that the development community sees. We are required on a particular project that I am working on, it happens to be in Gilbert, to extend a water line for about a mile. The City, at the same time that we are supposed to be extending this water line, is going to be extending sewer lines and a major effluent line. It is in a small roadway. We reasoned that we should just have the same engineering firm that is doing the City's work design the project for us because they will already have the data. So it should be real easy for them to do an add on. We got permission from the City to approach this company. This company primarily does work for government and what they quoted us was exactly twice the cost that we are actually paying because we didn't hire them. When they told us what they wanted to design this 12-inch water line for a mile it was double what we are actually paying another firm. So when the first firm lost our business they wanted to know why we didn't hire them because they are interested in getting into working with private development. They are used to charging double and taking longer to do things. That is their mentality. They were baffled as to why we didn't hire them. What I think Mr. Patel is saying is that with companies that only do business with government agencies, the price is different and the approach is different. The only way we can change this is to take a look at the requirements we make of the bidders.
- Phillips:* Mr. Chairman, Members of the Board, we will put this on the agenda for January. We'll get Russ to work an analysis to see if there are efficiencies that can be had. I would offer to you that we do look for those, and we do bid competitively, to those who are interested. However, we can review why we do things the way we do and why we feel we are getting the best bang for the buck. There are rules that public entities have to follow in the bidding process.
- Cooper:* We know that you are doing everything within the norm and standard practices. I guess what we are saying is maybe we can be more entrepreneurial, brainstorm together; maybe there are some other approaches that we could explore. We're not trying to say that there is any incompetence or lack of effort on the part of the District. What we are saying is that maybe we can find ways of being more competitive and attracting more bidders or a different kind of bidder than would normally bid on these kinds of projects.
- Lemmon:* Mr. Chairman, Members of the Board, this item was not on the agenda. I would just like to point out that the State Law governing the acquisition of consulting contracts, as opposed to construction contracts, is prohibited from asking for the price up front. That is the State Law and one of the things we have to deal with. We can have a longer discussion on this at another time.
- Patel:* I am definitely aware of that and I would hate for that to change. Being in the private marketplace, if I were competing for private work, we know the

game. It's going to be a much wider playing field. You have to approach it with a very very sharp pencil. One way of looking at the efficiency of your system is how many different providers are you working with? If out of the 300 or so in the pool, you have narrowed it down to 10 or 12, that is a very small pool.

Phillips:

Mr. Chairman, Mr. Patel, we will bring an information item on this topic to you next month, at least our perspective, for further discussion.

The meeting was adjourned at 3:35pm